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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,124	10/14/2003	Scott Jon Benjamin	EA-00046D2	7619

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EXAMINER	
TRUONG, CAM Y T	

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/686,124	BENJAMIN ET AL.	
	Examiner	Art Unit	
	Cam Y T. Truong	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2006*.
2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 23-29* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-11 and 23-29* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413).
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant has amended claims 1-11 and added claims 23-29 in the amendment filed on 2/2/2006.

Claims 1-11 and 23-29 are pending in this Office Action.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 23-29 are rejected under 35 U.S.C.101 because the language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practice application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C 101.

Claims 23-29 recite “a method”. However, the bodies of claims do not product a concrete, useful, and tangible result. Thus, the claims are merely abstract idea and is being processed without any links to a practical result in the technology arts.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-11, 23, 26, 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knoblock et al (USP 6023699) in view of Jernigan (USP 5210686) and further in view of Rivette (US 6339767).

As to claim 1, Knoblock teaches the claimed limitations:

"at least one each of a parts information lookup table, a location information lookup table, and a unit storage table wherein: said location information lookup tables provide a list of available locations to place a part in a unit of manufacture and further comprise a location definition lookup table" as (col. 3, lines 50-60; col. 9, lines 55-67; col. 22, lines 20-40), "said parts information lookup tables provide a catalog of parts and further comprise a parts list lookup table used to identify each part" as (col. 9, lines 45-55; col. 22, lines 20-40), "a unit parts list storage table, which is related to one or more of said parts in said parts list information lookup tables to provide a list of parts for each said unit of manufacture, where each part in said unit parts list storage table is assigned a location from said location definition lookup table" as (col. 12, lines 20-67);

"said unit storage tables provide the configuration of a unit of manufacture comprising: a unit definition storage table, which is related to said location information lookup table to identify a specific unit of manufacture" as (col. 13, lines 30-60);

"a unit parameter list storage table, which is used to record configuration parameter values for each part in said unit of manufacture, which is related to both said unit parts list storage table and said parameter definition lookup table" as (col. 13, lines 30-60).

Knoblock fails to teach the claimed limitation "a set of parameter information lookup tables related to said parts list lookup table for defining any number of parameters of information unique to each part comprised of parameter definition lookup table defining a list of said parameters for each part, which is related to a parameter list lookup table which defines a list of parameters that may be associated with any part in said parts list table; a pair of configuration management storage tables, wherein said pair of configuration management storage tables are linked together, and one of the said configuration management storage table is a configuration management status table and the other is a configuration management memo table".

Jernigan teaches the item number is placed in the first field of the explosion control table 36 and is used as the key to index into the bill of material components data file 44 and move to a deeper level of the bill of material. The bill of material level is placed in the second field of the explosion control table 36 and represents the current component level within the bill of material explosion, i.e., the value in the current level counter incremented by one. The purpose of this field is to enable quick discarding of a component of an assembly when completely exploded and to determine the next item to explode when moving back up the bill of material. As each component is retrieved, it is assigned an increasing component sequence number starting with the number one. The component sequence number is placed in the third field of the explosion control table 36. The component sequence number field takes the place of the cursor and, together with the bill of material level, enables direct retrieval of the next item. This information shows that each of item number in control table is a unique number to identify for each item in the bill of material components data file 44. Each of item number is represent a parameter information or a set of item numbers are presented as a set parameter information (col. 3, lines 105-65).

Rivette teaches The BOM_BOM xref table 1219 includes a record for each parent/child relationship in the BOMs represented in the BOM table 1217. Each record of the BOM_BOM_xref table 1219 includes a parent_BOM_id attribute and a BOM_id attribute. The parent_BOM_id attribute stores the BOM_id of the parent BOM node, and the BOM_id attribute stores the BOM_id of the child BOM node. Each record of the BOM_BOM_xref table 1219 also includes a sort_order attribute which specifies the order in which the records in the BOM_BOM _xref table 1219 should be displayed or printed, when an appropriate command is received from the user. The value of the sort_order attribute is set to a default value, which is preferably 100. The user may change this value to any other number, either below or above 100. When printing or displaying the records of the BOM_BOM _xref table 1219, such records are printed or displayed in ascending or descending order (as indicated in the user command) based on the sort_order attribute (col. 72, lines 25-42).

The BOM table 1217 and the BOM_BOM _xref table 1219 shall be further described by reference to examples shown in FIGS. 24-25. FIG. 24 includes an example BOM table 1217X and FIG. 25 illustrates an example BOM_BOM _xref table 1219X. These tables in FIGS. 24 and 25 store data corresponding to the example BOMs 2202 and 2302 shown in FIGS. 22 and 23, respectively. Accordingly, the example BOM table 1217X in FIG. 24 includes an entry for each BOM node in the bicycle BOM 2202 and the lawnmower BOM 2302. For simplicity purposes, only the BOM _id attribute and the name attribute are shown in the example BOM table 1217X. Accordingly, the BOM table 1217 includes an entry for the bicycle assembly, the bicycle frame subassembly, the screw part, the wheel subassembly, the rim part, the tire part, the bicycle handle bar subassembly, the metal rod part, the hand grip part, the lawnmower assembly, the lawnmower frame subassembly, the engine subassembly, and the lawnmower handle bar subassembly.

The above information shows that the BOM table 219 is represented as a configuration management status table and the BOM table 217 is represented as a configuration management memo table (col. 72, lines 45-62).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to modify Jernigan's teaching of the item number is placed in the first field of the explosion control table 36 and is used as the key to index into the bill of material components data file 44 and move to a deeper level of the bill of material. The bill of material level is placed in the second field of the explosion control table 36 and represents the current component level within the bill of material explosion, i.e., the value in the current level counter incremented by one. The purpose of this field is to enable quick discarding of a component of an assembly when completely exploded and to determine the next item to explode when moving back up the bill of material. As each component is retrieved, it is assigned an increasing component sequence number starting with the number one. The component sequence number is placed in the third field of the explosion control table 36. The component sequence number field takes the place of the cursor and, together with the bill of material level, enables direct retrieval of the next item and Rivette's teaching of BOM tables to Knoblock's system in order to allow a user to identify and build a particular equipment following user's desire and further searching parts of items in a relational database quickly by using BOM tables.

As to claim 2, Knoblock teaches the claimed limitation "wherein said location definition lookup table is related to apart family definition lookup table which is related to said parts list lookup table for identifying which parts are compatible with each location of said location definition" as (fig. 10J-10K).

As to claim 3, Knoblock teaches the claimed limitation "wherein said location definition lookup table is related to an equipment type definition lookup table for identifying any number of different types of units of manufacture" as (col. 12, lines 25-67).

As to claim 4, Knoblock teaches the claimed limitation "wherein said location definition lookup table is related to a location description lookup table for defining one, or more locations for a type of unit of manufacture" as (col. 12, lines 40-60).

As to claim 5, Knoblock teaches the claimed limitation "wherein said parts list lookup table is related to a part type lookup table for grouping said parts into part categories" as (col. 13, lines 45-60).

As to claim 6, Knoblock teaches the claimed limitation "wherein said parts in said parts list lookup table are related to a kit definition lookup table for grouping said parts into kits" as (col. 20, lines 25-67).

As to claim 7, Knoblock teaches the claimed limitation "wherein said unit parts list storage table is related to a processor group storage table for grouping parts associated with a processor" as (col. 22, lines 40-67).

As to claim 8, Knoblock teaches the claimed limitation "an interface definition lookup table and a unit interconnect storage table, wherein said parts list lookup table is related to said interface definition lookup table for defining interfaces unique to a part in the parts list, and said unit parts list storage table is related to said unit interconnect storage table, which is related to said interface definition lookup table for defining connections between parts in said unit parts list" as (col. 17, lines 15-50).

As to claim 9, Knoblock teaches the claimed limitation "wherein said interface definition lookup table is related to an interface family lookup table for identifying compatible mating connections of said parts" as (col. 17, lines 15-50).

As to claim 10, Knoblock teaches the claimed limitation "wherein said parameter list lookup table is related to a parameter group definition lookup table for grouping said parameters into parameter categories" as (col. 3, lines 15-50).

As to claim 11, Knoblock teaches the claimed limitation wherein said parameter list lookup table is related to a parameter description look up table for defining multiple groups of parameters, which allow multiple pre-defined configurations of a part" as (col. 17, lines 15-50; col. 3, lines 15-50).

As to claim 23 is rejected under the same basis as discussed in claim 1.

As to claims 26, 28 and 29 are rejected under the same basis as discussed in claim 1.

6. Claims 24-25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knoblock et al (USP 6023699) in view of Rivette (US 6339767).

As to claim 24, Knoblock teaches the claimed limitations:

"using a relational database to record and retrieve configuration information on a unit of manufacture comprising at least one each of a parts information lookup table, a location information lookup table, a unit storage table" as (col. 3, lines 50-60; col. 9, lines 55-67; col. 22, lines 20-40).

Knoblock does not explicitly teach the claimed limitation "an pair of configuration management storage tables, wherein said pair of configuration management storage tables are linked together, and one of said configuration management storage tables is a configuration management status table and the other is a configuration management memo table".

Rivette teaches The BOM_BOM xref table 1219 includes a record for each parent/child relationship in the BOMs represented in the BOM table 1217. Each record of the BOM_BOM_xref table 1219 includes a parent_BOM_id attribute and a BOM_id attribute. The parent_BOM_id attribute stores the BOM_id of the parent BOMnode, and the BOM_id attribute stores the BOM_id of the child BOM node. Each record of the BOM_BOM_xref table 1219 also includes a sort_order attribute which specifies the order in which the records in the BOM_BOM _xref table 1219 should be displayed or printed, when an appropriate command is received from the user. The value of the sort_order attribute is set to a default value, which is preferably 100. The user may change this value to any other number, either below or above 100. When printing or displaying the records of the BOM_BOM _xref table 1219, such records are printed or displayed in ascending or descending order (as indicated in the user command) based on the sort_order attribute (col. 72, lines 25-42);

The BOM table 1217 and the BOM_BOM _xref table 1219 shall be further described by reference to examples shown in FIGS. 24-25. FIG. 24 includes an example BOM table 1217X and FIG. 25 illustrates an example BOM_BOM _xref table 1219X. These tables in FIGS. 24 and 25 store data corresponding to the example BOMs 2202 and 2302 shown in FIGS. 22 and 23, respectively. Accordingly, the example BOM table 1217X in FIG. 24 includes an entry for each BOM node in the bicycle BOM 2202 and the lawnmower BOM 2302. For simplicity purposes, only the BOM _id attribute and the name attribute are shown in the example BOM table 1217X. Accordingly, the BOM table 1217 includes an entry for the bicycle assembly, the bicycle frame subassembly, the screw part, the wheel subassembly, the rim part, the tire part, the bicycle handle bar subassembly, the metal rod part, the hand grip part, the lawnmower assembly, the lawnmower frame subassembly, the engine subassembly, and the lawnmower handle bar subassembly.

The above information shows that the BOM table 219 is represented as a configuration management status table and the BOM table 217 is represented as a configuration management memo table (col. 72, lines 45-62).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to modify Rivette's teaching of BOM tables to Knoblock's system in order to allow a user to identify and build a particular equipment following user's desire and further searching parts of items in a relational database quickly by using BOM tables.

As to claim 27, Knoblock teaches the claimed limitation "wherein said location information lookup tables provide a list of available locations to place a part in a unit of manufacture and further comprise a location definition lookup table, and said parts information lookup tables provide a catalog of parts and further comprise a parts list lookup table used to identify each part" as (col. 13, lines 45-60).

As to claim 25, Knoblock and Rivette teaches the claimed limitation subject matter in claim 24, Rivette further teaches the claimed limitation "wherein the method includes accessing at least one of said linked configuration management storage tables by using an index key which defines the configuration management records for a part definition, location, or unit location" as (col. 72, lines 25-62).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam Y T Truong whose telephone number is (571) 272-4042. The examiner can normally be reached on Monday to Firday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cam Y T Truong
Primary Examiner
Art Unit 2162
12/7/2006